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Imaginaciones feministas frente a la automatización y el “fin del trabajo”: Desautomatizar la reproducción y reorganizar el parentesco

María Julieta Massacese

ABSTRACT

Automation is once again raising concerns about the threat it poses to employment. Feminists in the 20th century believed that technology could liberate women from undesirable labor. However, historically, industry and automation have not reduced women's workloads but have instead favored unpaid work, flexibility, and work overload. Rather than mitigating the care and ecological crises, technological development has exacerbated them. This raises an important question for feminist theory: should technology be rejected as a way of reducing women's workload? To explore this, we analyze classical and contemporary contributions from feminist theorists on the future of work and technology. Using philosophical and feminist theoretical methods, our aim is to examine the relationships between these imaginings and home, family, design, and consumption. This article argues that a feminist analysis of work must include the technological dimension, considering the production of human beings as a strategic technology for feminist purposes. To imagine an alternative near future, the article draws on Donna Haraway's making kin, emphasizing defamiliarization and refamiliarization of social and ecological relations, pluralist science, and technology for sustainable regeneration of life; and finally, as suggested in this analysis, the ironic persistence of labour in a post-industrial or post-capitalist era.

Keywords: Sexual division of work; Automation; Future studies; Kinship.

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RESUMEN

La automatización vuelve a generar preocupaciones sobre el empleo. En el siglo XX, las feministas creían que la tecnología podía liberar a las mujeres del trabajo indeseable. Sin embargo, históricamente, la automatización no ha reducido la carga de trabajo de las mujeres, sino que ha favorecido el trabajo no remunerado, flexible y excesivo. Esto plantea una pregunta importante para la teoría feminista: ¿debería rechazarse la tecnología como forma de reducir la carga de trabajo de las mujeres? Para explorar esto, analizamos contribuciones clásicas y contemporáneas de teóricas feministas sobre el futuro del trabajo y la tecnología. Utilizando métodos filosóficos y teóricos feministas, nuestro objetivo es examinar las relaciones entre estas imaginaciones y el hogar, la familia, el diseño y el consumo. Argumentamos que un análisis feminista del trabajo debe incluir la dimensión tecnológica, considerando la producción de seres humanos como una tecnología estratégica con fines feministas. Para imaginar un futuro cercano alternativo, el artículo explora y evalúa la propuesta de “hacer parentesco” de Donna Haraway, enfatizando la desfamiliarización y refamiliarización de las relaciones sociales y ecológicas, la ciencia y tecnología pluralista para la regeneración sostenible de la vida; y finalmente, sugerimos, la irónica persistencia del trabajo en una era postcapitalista.

Palabras clave: División sexual del trabajo; Automatización; Estudios futuros; Parentesco.

1. Introduction

The ability of technology to replace or reduce human labor is a topic that elicits both conflicting and ambivalent reactions. While there are those who state that this process may have a beneficial social effect by eliminating repetitive work and increasing production, others consider that for the same reasons technology threatens employment. In fact, registered employment is declining worldwide, and some projections estimate a significant loss or reconversion of jobs due to automation. Catastrophic estimates such as those by Frey and Osborne (2015), although strongly criticized for their methodology, continue to be widely cited (Wajcman, 2017). While the most enthusiastic analysts—including several Silicon Valley gurus—announce “the end of work”, other critical voices are also raised. However, this is not a topic that can be transparently classified in ideological terms. The belief that technology is a progressive factor that can liberate human beings from undesirable jobs, as well as anti-technological or critical views of technology, are common to leftists and conservatives alike (Graziano and Trogal, 2021).

Within feminist theory, there are also different positions on technology. The Italian Marxist feminists of the 1970s, unlike Marx, distrusted the inherently progressive roles of technology and employment. While liberal feminists fought throughout the twentieth century to encourage women to enter the world of work, Marxists warned that if unpaid work went unpaid, it would only increase women’s workload. These developments gave rise to the Wages for Housework movement, which sought to make visible the social value of reproductive work (domestic labor, production of

human beings, childrearing, and care for people). Framed within American Marxism and representing a more promising approach to technology, Angela Davis proposes industrialization and de-privatization of life that provide a collective and centralized solution to the “countless chores” of domestic labor. An even more optimistic strain of feminist speculation can be found in the work of Canadian American Shulamit Firestone, who proposed that technology could replace women in reproductive tasks (including gestation). During the twentieth century, feminists from all over the world tested different experiments around feminist design and architecture with an eye to reducing and distributing work. In general, feminists considered that technological advances would not make sense unless society (the family) was eliminated or transformed.

However, neither industrialization nor automation has reduced women’s workload but has rather favored an increase in work overload and precariousness. These processes, like inequality, have increased since the impact of the COVID pandemic. Instead of mitigating the care and ecological crises, technological development has exacerbated them. While the advance of automation clearly tends to reduce or at least reconvert jobs, in varying degrees, the end of work or its reduction seems a more difficult horizon to reach. This problem most drastically affects people who do not have registered jobs and those who do unpaid work, mostly women. This raises an important question for feminist theory and imagination: Should technology be rejected to reduce women’s workload?

In this article, our aim is to explore the question of the relationship between technology and work through different imaginings of the future proposed by feminist theorists. To achieve this, we have selected classical and contemporary contributions on the topic. Given that this relationship has been extensively explored by Marxist and post-Marxist authors, most of the works we examine belong to these currents. Using methods inherent to philosophy and feminist theory, we have two objectives. Firstly, we are interested in tracing how feminists in classical works explained the relationship between technology, future, and women’s work, as well as the alternative ways in which they imagined these relationships. Secondly, we intend to evaluate the recent contributions of Donna Haraway on near futures, given their central role in contemporary feminist speculation. In both groups of contributions, we analyze different positions regarding the role of technology and its potential for emancipation, as well as how they understood the connection of this problem with home, family, design, and consumption.

2. The role of technology in the feminist future

Technology has played a role in feminist developments concerning the present and future, especially since the 1970s. Within Marxist feminisms, two basic attitudes can be identified, one toward technology, in general, and another toward automation. The former involves moderate technological optimism that relies on the possibility of industrialization, rationalization, and cen-

tralization of reproductive labor, which will be explored through the works of Firestone and Davis. The latter can be understood as technological skepticism that, although it does not rule out technology, distrusts the solutions that it can provide if it is subsumed to capitalist interests, as shown by the position of Italian scholar Silvia Federici. Strictly speaking, the position of technological optimism requires societal transformation to ensure that technology serves life and not capital, rather than being a mere technological solutionist position. From this perspective, the positions do not differ but display different degrees of confidence in technological development, and they accept or reject different policies based on their usefulness in this direction (in particular, in terms of salary for housework).

The structural transformation demanded by Marxist feminists added to the historicization of capitalism the history of the family household, domestic labor, and the nuclear family. Their contingent character supported the possibility of a profound transmutation of these structures. Davis showed that they were not only structured in terms of gender and class but also race. For the most optimistic, the contingent nature of technology also enabled a change in design so that it would orient technology toward social and emancipatory ends. For the most skeptical, reliance on automation was a burden that could be traced back to Marx and that should be challenged. The effects of these differences are reflected in attitudes toward the fight for wages for domestic labor, which also reveal differences in the consideration of race. More crucially, these discussions call into play the status of technology and labor themselves, raising questions about their value and their role in feminist politics and speculation. The following sections will review what are the central aspects of the debate, including the role of the family and the household, the feminist design of technology, and the status of labor. These sections will serve as a background for evaluating Donna Haraway's speculative proposal.

2.1 The role of the family and the home: The invention of the family and the housewife

One of the first points that feminist Marxist theorists made in their review of Marx's legacy was that he had not paid enough attention to reproductive labor. Federici (2018, p. 12) hypothesized that this oversight could be due, at least in part, to the fact that the moment of production that Marx analyzed was not that of the nuclear family that would be established at the end of the nineteenth century, but rather the maximum exploitation of the Industrial Revolution, during which men, women, and children worked between 12 and 16 hours a day and were hardly able to carry out reproductive labor (Federici, 2021, p. 96). Davis and Federici pointed out that historically this exhausted the working mass, who died at around the age of 40; therefore, this model was replaced with that of the nuclear family, which established a sexual division of labor in which women oversaw the household and men's wages were improved to allow the subsistence of the family on a single income. This process gave rise to housework and the narratives around the housewife and the breadwinner. Davis noted that "women began to be ideologically redefined as the guardians of

a devalued domestic life” (Davis, 1981/2001, p. 228), but explained that for American black women domestic work rarely meant confinement in the home. In contrast, women officiated as domestic workers in their own homes, to which they added work outside the home, including the homes of other families. Marxist feminism advanced in the definition and theorization of reproductive labor and its social function. In addition to denouncing its invisibility, its unpaid or poorly paid nature, and the fact that it represents an overload of women’s working hours, they showed that it is a source of surplus value for capitalism.

As regards automation, it may be asked how work and sometimes work that is so poorly recognized and rewarded could be ended or reduced. This question, raised today, implies the consideration that employment has experienced a global crisis for decades, such that a single salary is not enough to support an entire family, gain access to housing, and afford reproductive labor, whether paid or unpaid. Employment bears resemblance to reproductive labor, a phenomenon that has been called the feminization of poverty or employment: labor flexibility, unregistered work, subsistence remuneration, and isolation. Following Helen Hester (2018), the employment crisis, which cannot be reduced to the advance of automation, must be understood in terms of the care crisis, that is, the population’s difficulty in accessing jobs (and wages that allow more than subsistence), public care services, and the necessary social reproduction without this consuming most of the daily time. The devaluation and privatization of social reproduction mean that the burden involved in activities such as childrearing, feeding, and care for the elderly must be faced by people individually, who are also unequally affected by their geographical, class, gender, and race realities.

The problem of social reproduction has triggered different feminist responses. In the 1970s, a response was given by the international Wages for Housework movement, in which Italian Marxists, including Federici, also participated. This movement demanded that unpaid domestic work earn a wage. Davis (1981/2001, p. 237) was highly critical of this position, “It would seem that government paychecks for housewives would further legitimize this domestic slavery.” In this regard, she provided two arguments based on the reality of domestic labor performed outside the home by black American women. First, she argued that one of the first demands of the domestic workers’ movement was the delimitation of the tasks to be carried out, since household chores are endless and indefinite, and therefore, lead to continuous exploitation. Her second argument alluded to the reality of the wage paid for housework, something that black women in the USA know very well, as they “have been receiving wages for housework for untold decades” (Davis, 1981/2001, p. 237). In fact, the salaries of private domestic workers are usually the worst paid on the entire salary scale and are sometimes subject to special legislation conferring on the workers fewer rights than other jobs. If in the intimate sphere, this work is justified in terms of love or care, even when it is done outside the home and for money, the familiarization and informalization of this labor as labor remain, namely the idea that it is non-productive work and, to some extent, expendable. In this framework, feminists have opened a horizon that includes the possibility of overcoming or minimizing reproductive labor through technology. The following subsection will address this topic.

2.2 The design problem or the broken promise of the smart home

As regards the notion that reproductive labor can be reduced or overcome technologically, two different feminist attitudes can be identified. Within the optimists, the article will consider the moderate position of Davis and the solutionist position of Firestone. Despite major differences, both perspectives require not only a certain technological development but also intense social reorganization. Later in this article, the positions will be compared with Federici's technological skepticism. For the time being, what can be highlighted as something in common in the reviewed positions is that reproductive labor, especially domestic labor, is undesirable and little enriching for those who carry it out. Davis points out how domestic labor has been excluded from the opportunity to benefit from technological advances.

One of the most closely guarded secrets of advanced capitalist societies involves the possibility — the real possibility— of radically transforming the nature of housework. A substantial portion of the housewife's domestic tasks can actually be incorporated into the industrial economy. In other words, housework need no longer be considered necessarily and unalterably private in character. Teams of trained and well-paid workers, moving from dwelling to dwelling, engineering technologically advanced cleaning machinery, could swiftly and efficiently accomplish what the present-day housewife does so arduously and primitively. Why the shroud of silence surrounding this potential of radically redefining the nature of domestic labor? Because the capitalist economy is structurally hostile to the industrialization of housework. [...] In other words, the industrialization of housework, along with the socialization of housework, is becoming an objective social need. Housework as individual women's private responsibility and as female labor performed under primitive technical conditions, may finally be approaching historical obsolescence. (Davis, 1981/2001, p. 223-24)

Davis's proposal requires, in addition to its automation, a centralization of social reproduction as a subject to be addressed collectively and points out that the only advances in this regard have been carried out in socialist countries. On the other hand, Firestone, influenced by the development of cybernetics and by socialist experiences in the USSR, the Weimar Republic, and Salvador Allende's Chile, was confident that technology could be the key to this revolution (Paasonen, 2010). Unlike Davis, Firestone believed that automation could also reach as far as biological gestation processes. This is important because, for Firestone, the oppression of women is explained by the fact that they assume and are subsumed, biologically, into the reproductive function. A political and social revolution could emancipate women from this role and expand "the childbearing and childrearing role to the society as a whole, men as well as women" (Firestone, 1970/1979, p.

206). The possibilities of artificial reproduction, a theme that had appeared in science fiction, did not seem far off in technical terms.

Such reproduction outside the womb could mean a social change equivalent to the development of the contraceptive pill during the twentieth century, with the potential to emancipate women from the reproductive role and transform society, along with profound urban, educational, ecological, and economic reorganization. This cybernetic revolution would include the automation of all paid labor and domestic labor. Federici (2021, p. 46), for her part, was critical of the “Promethean view of technological development that Marx and the entire Marxist tradition have promoted.” In this regard, she argued that the development of capitalism has widely shown its parasitic and destructive nature for the ecosystem and for the people who live and work, an issue made evident by the industrialization of agriculture. Likewise, automation “clashes with the fact that the largest amount of work on earth is of a highly relational nature and hardly subject to mechanization” (Federici, 2021, p. 63). Despite their differences, what Federici’s technological skepticism and the more optimistic positions of Davis and Firestone have in common is the denunciation of the supposed neutrality of technology, since they highlight a lack of interest in a development model that could be oriented toward a decrease in labor.

What these positions reveal is the need and potential for a design with a feminist orientation, as well as the lack of will, investment, and interest in this type of program in capitalist countries. Federici demonstrated that automation is a process that took place in different phases and intensities, and, therefore, there are elements to judge its success. Other feminist critiques, such as those of Ruth Schwartz Cowan (2008), have shown that the introduction of electrical appliances in family households does not necessarily save work, but rather reorganizes it, increasing expectations of what a household should look like. In addition, unlike Davis’s proposal, these machines were not conceived to meet the needs of a collective but were intended for private use within a family framework and are only affordable for those who need them the least. Interesting experiences have been put forward in terms of architecture and habitability, which showed that the design of collective spaces, moderately mechanized and with a strong interest in soft technologies (such as cots for six children or custom-made children’s furniture) reduce reproductive labor, although they do not necessarily challenge the sexual division of labor (Hayden, 2000). In addition, the development of reproductive technologies, contrary to Firestone’s thought, has not historically challenged the nuclear family or emancipated women from their reproductive role, quite the contrary. In this regard, Franklin (1988) indicates that it is necessary to return to the feminist question of why “if it is possible to send a man to the moon to play golf, is it so hard to develop a male contraceptive pill?” and she points out that the problem is that even if it were developed, it would still be necessary for men to want to take it and for women to be able to trust that they do. This is because “technology alone will never bring about what years of political struggle have failed to achieve, just as IVF will never lead to the collapse of the nuclear family.”

2.3 Work, consumption, technology: post-work or anti-work?

What the problem of feminist design reveals is, as Franklin pointed out, the political background of the developments, uses, and interests of technology. On the evidence that technology by itself can hardly lead to emancipation, two lines of thought have emerged. Although neither of them denies the importance of political struggle, one of them considers that the transformation of society implies denying the Prometheism of technology, while the other one considers that there is still an emancipatory potential in it. Attitudes toward technology are linked, as Federici shows, to evaluations related to human labor. Marxist Prometheism, for that matter, considers (industrialized) work to be a path to progress. The recovery of this Marxist Prometheism has led to various post-work or post-industrial scenarios such as the case of Gorz (1983), some lines of accelerationist autonomism (Srnicsek & Williams, 2016), or the idea of total automation as “luxury communism” (Bastani, 2019). These paths could lead to a liberation of the “general intellect” to which Marx (1857/1993) alluded in *Fragment on machines*, that is, to the recovery of social and technological wealth that so far only exists as a function of capital.

The problem noted by some authors, such as Graziano and Trogal (2021, 3), is that the “metabolic needs of a society that equates luxury with access to automated consumption paths would be, [...] astronomical and unsustainable”. In this regard, Davis can also be cited when she argues that the collectivization and socialization of domestic labor (whose individual and female responsibility would be abolished) “presupposes an end to the profit-motive’s reign over the economy” (1981/2001, p. 243). It is evident that a transformation of work, particularly domestic labor, in post-work technological scenarios cannot be expected unless the idea of profit and consumption is called into question. On the other hand, proposals such as Bastani’s do not consider reproductive labor or the jobs that women have access to, and neither do Stanley Aronowitz’s post-work proposals (Weeks, 2011, p. 162). In this sense, the accelerationist proposals of Hester and Srnicsek (2018) do include reproductive labor in their analysis, as well as the ecological dimension, which appeared as part of the concerns of Firestone and Federici when thinking about automation. Both considered that industrialization had brought ruin to the planet, but while Federici did not see much hope in it, Firestone (1970/1979, 193) considered that technology could replace the “destroyed «natural» balance”:

A feminist revolution could be the decisive factor in establishing a new ecological balance: attention drawn to the population explosion, a shifting of emphasis from reproduction to contraception and demands for the full development of artificial reproduction would provide an alternative to the oppressions of the biological family; cybernation, by changing man’s relationship to work and wa-

ges, by transforming activity from «work» to «play» (activity done for its own sake), would allow for a total redefinition of the economy, including the family unit in its economic capacity. The double curse, that man should till the soil by the sweat of his brow, and that woman should bear in pain and travail, would be lifted through technology to make humane living, for the first time, a possibility. The feminist movement has the essential mission of creating cultural acceptance of the new ecological balance necessary for the survival of the human race in the twentieth century. (Firestone 1970/1979, p. 202)

Although they differ in their consideration of automation, both Firestone and Federici considered that what must disappear, in the end, is both work (paid and non-paid) and the nuclear family. On the latter point, Davis (1981/2001, p. 236) is more cautious in stating that, for racist reasons, family life has been prohibited to certain individuals or collectives for being considered a threat or an expense. For Firestone, the family must be replaced with larger communities in planned cities (Franklin, 1988, pp. 193-98). Federici also points out that the key to social transformation is offered by community groups that meet the reproductive needs of collectives that are larger than nuclear families, as demonstrated by various experiences in developed countries, such as the work of Dolores Hayden, or in developing countries, the so-called Third World, through cooperatives, soup kitchens, and urban vegetable gardens. These communities, which have “very limited technological inputs” (Federici, 2021, p. 64), survive despite automation rather than because of it. In addition, Firestone points out in the quote above that work, in a post-revolutionary scenario, would be transformed into a “game”. Although Federici does not use this terminology, when reflecting on the experience of Wages for Housework, she claims that the fight for wages should not overshadow the fact that it is, just like the fight for the provision of common and public goods and services for the population, a strategy that is an end. The wage struggle thus embodied a larger objective, “Our aim is to be priceless, to price ourselves out of the market, for housework and factory work and office work to become «uneconomic»” (Federici, 2021, p. 22).

3. What to do about the disappointment of technological solutionism?

This section will elaborate on Donna Haraway’s approach as an alternative near future that expands on the concerns and responses of Marxist feminism regarding the status and future of work. These developments are found in her latest book, *Staying with the Trouble: Making Kin in the Chthulucene* (2016), and can be framed within what Haraway calls speculative feminism, a practice linked to feminist science fiction in which the imagination has a performative and political function. In her book, technology plays a central role in the apparent dilemma created by the world ecological crisis, expressed either in the techno-apocalypse or in the idea of a technological solution, “technology will somehow come to the rescue of its naughty but very clever children” (2016,

p. 3). Haraway's response seeks to discredit the dilemma and seize the dangers and opportunities of the Anthropocene and of technology, away from magical solutions. In addition to presenting Haraway's proposal, this section will evaluate to what extent it accounts for the relevant traditions of Marxist feminism considered in this article: the redefinition of the family, the family household, and the city, with a special interest in not universalizing any family or housing reality; and the development of a feminist design of technology, which also implies a pluralistic science oriented toward the sustainability of life and the problem of work and its future.

Reproduction, broadly speaking, is a theme that has figured prominently in Donna Haraway's developments. As a historian of science, the theme of reproduction was already explored in her doctoral thesis, devoted to the history of embryology (1976/2022). Reproduction, nurturing, and family models appeared again in *Primate Visions* (Haraway 1989/2006), linked to the development of primatology, psychology, and eugenics. During the 1980s, influenced by socialist feminism, Haraway interrogated the role of women in the new "integrated circuit" of technology, "housework outside the home", and the restructuring of the bourgeois family (1991). There, in *A Cyborg Manifesto*, she advocated in favor of abandoning both technophilia and technophobia within feminist and socialist theory while endorsing a politics of cyborg alliances that could account for the transformations of science, technology, and society at the end of the last century. In retrospect, Franklin points to at least three main meanings attributed to reproduction in Haraway's work: 1) the "reproduction of the same", as both biblical and modern western narrative and metanarrative that have established dualisms in which a term is marked as different, natural and appropriable (body, animal, nature); 2) social reproduction in the Marxist feminist sense, as unpaid labor and reproduction of the labor force; 3) the notion that all technology is, for Haraway, "reproductive technology" (Franklin, 2022). The model of the reproduction of people as individuals, however, is a Western humanist model, which is why Haraway prefers the term "generative" or "regenerative politics" for the proposals that she makes.

3.1 Redefinition of the family as multispecies kinship

The Marxist tradition is not exempt from the "reproduction of the same." Like the so-called primitive peoples, within the Marxist canon, women were between the natural and the social. Even the work of Engels, in Haraway's view (1991, p. 132), "almost laid a basis for theorizing the specific oppressions of women" through his distinction between the production of life (of human beings) and the production of the means of existence. However, Marx, by considering that the relationship between men and women was the most natural social relationship, left heterosexuality on the side of nature. In both cases, the difficulty persisted in situating women in history and society. In the words of Haraway (1991, p. 132), "the root difficulty was an inability to historicize sex itself; like nature, sex functioned analytically as a prime matter or raw material for the work of history." Even when the family was historicized, sex and kinship remained on the side of nature, a situation that was reversed by feminist and queer theory.

Towards the end of the last century, the nuclear family model was already obsolete and had given rise to what Richard Gordon called “the homework economy outside the home”, or as it was later called, the feminization of poverty. For Haraway (1991, p. 167), the family of this model displays an “oxymoronic structure of women-headed households and its explosion of feminisms and the paradoxical intensification and erosion of gender itself.” Although the new technologies do not cause these processes by themselves, they certainly intensify the privatization of the public, as well as social relations concerning sexuality and reproduction (for example, visualization technologies and reproductive rights). At that time, Haraway called for a non-humanist political alliance, based on machinic, animal, and feminist assemblages not anchored in identity but in coalition politics, and claimed that “Cyborg ‘sex’ restores some of the lovely replicative baroque of ferns and invertebrates (such nice organic prophylactics against heterosexism)” (1991, p. 150).

Ecological concerns, already present in Haraway’s production in the 1980s, appear in her latest work on the problem of the environmental crisis. Although it might not seem so obvious that reproduction continues to be a central theme in Harawayan thought, it is possible to suggest, as does Franklin, that “her more recent concern with the Anthropocene foregrounds the struggle between mass death in the age of extinction and the struggle for survival that will include nonhumans as well as the Anthros. This, of course, is the biggest battle over reproduction ever waged” (2022). Haraway argues that at the base of the unrestricted exploitation of ecosystems is human exceptionalism, that is, the idea that the only important actor in evolutionary and social history is the human being, a human being who is not neutral but who is—among other marks—gendered and racialized. Instead, she proposes the figures of companion species, compost, and a queer practice of “making kin” with human and non-human, living and non-living, organic, and inorganic. Antinatalism and ecological concern about overpopulation also inform the Harawayan slogan of “make relatives, not babies.” An extended kinship is the basis for de-automating and dismantling the ideas of unrestricted growth and development concerning the central countries, which represent the greatest ecological burden. Haraway is very cautious about pointing out the dangers of discourses on population, but she does not refrain from proposing various reproductive policies such as three guardians per new baby, adoptions by the elderly, and immigration policies rather than birth control policies for developed countries.

3.2 The development of pluralistic science and technology oriented toward the continuity of life.

The criticism of human exceptionalism has led Haraway to adopt a position that aims to distance herself from posthumanism: she prefers to speak of *compost* rather than of posthumans, or *humusities* rather than humanities. Inherent to these decisions is the idea that, if inherited dualisms are to be avoided, the natural-social history of the world cannot be understood from a solely

human point of view. Haraway considers that there are many branches of posthumanism, some of which she finds valuable and with which she dialogues, but she also thinks that as a project it can be quickly appropriated by transhumanist projects. In an interview, she jokes about this possibility, “Let’s all be posthumanists and find our next teleological evolutionary stage in some kind of transhumanist technoenhancement” (Gane, 2006, p. 140). Technological solutionism is a version of human exceptionalism insofar as it places technology as a unique and privileged actor of historical change or, as Federici (2021, p. 61) ironized, “machines are not produced by machines in a sort of immaculate conception.”

The fantasies of technological solutionism are part of the dilemma between salvation and apocalypse that has shaped the limited way in which the ecological crisis has been understood. Haraway (2016, p. 3) argued that “in the face of such touching silliness about technofixes (or techno-apocalypses), sometimes it is hard to remember that it remains important to embrace situated technical projects and their people.” There is something degendering in technology that already appeared in “cyborg sex” and was taken up optimistically by cyberfeminism in the 1990s (Paasonen 2010, p. 69). More recently, Hester (2017) considers that technology is far from being degendered, as shown by the numerous computer assistants such as Siri or Google Assistant, but nevertheless, it is important not to take for granted which tasks could be automated and which could not. In some of Hester’s examples, machines are more visible as workers than women, and therefore, if the work marked as female were mechanized, it could lead to such work being better appreciated. Certainly, this does not improve the negative assessment of the feminine. Hester ironically summarizes, “This whole phenomenon is less a matter of «I’d rather be a cyborg than a goddess» and more a case of «I’d rather be an iPhone than a woman»” (2017, p. 50).

Technologies are human and non-human assemblages that, with their opportunities, risks, and contradictions, should not be abandoned by feminist politics. Haraway’s speculative near-future proposal posits that “all technology is reproductive technology” and reproduction, as previously discussed, is a strategic point that the feminist tradition has critically recovered. If a good part of feminist politics revolves around reproduction (including the possibility of ceasing to reproduce), by expanding the problem to a queer and multispecies network, the problem of reproduction appears linked to that of the continuity of life, which is under threat in the ecological crisis. In Harawayan terms, it may be stated that social reproduction (including gestation) is not only biological but needs to be not only social if human exceptionalism is to be left behind.

For this reason, when in the pieces of feminist speculation entitled *Camille Stories* Haraway imagines societies of the near future, refugia, not houses, appear. The story unfolds over five generations that follow a descendant named Camille, a symbiote of human and the threatened monarch butterfly, from 2025 over the course of four centuries. The problem of the family household is completely replaced by that of the generation of refugia, those spaces that were abundant during the Holocene for multiple species and are in decline (Tsing, 2015). The Communities of Compost, in Haraway’s account, emerged from individuals, groups, and collectives who “migrate to ruined

places and work with human and nonhuman partners to heal these places, building networks, pathways, nodes, and webs of and for a newly habitable world” (2016, p. 137). Reproductive technology is central to these communities devoted to partial recovery, and the spaces are more relational than atomized. As for the continuity of life “Over three hundred years, the Communities of Compost had built a potent earth wide network of refugia and foci of resurgent natural cultural diversity” (2016, p. 164). As for the reproductive politics of human production, Camille 1 is born into a community of about three hundred people, into a set of five children in symbiosis with endangered species. The reproductive policies of the Camille community are to prioritize immigration in terms of population growth and only then produce new human beings, ideally under a three-parent queer model. Camille 1 is born into a world of 8 billion humans, while Camille 5 dies in 2425, when the world population is 3 billion.

3.3 The ironic persistence of work

In the accounts of the Communities of Compost, the family has been redefined in terms of a multispecies kinship perspective. If, as the Marxist feminists indicated, the same division of reproductive and productive labor relies on the family, the question that arises is what happens to labor in the Communities of Compost, where all efforts are devoted to partial regeneration. By framing social reproduction in terms of multispecies regeneration and technology as reproductive technology, in my reading, labor also needs to be reframed. Although Haraway does not develop this theme in the context of Camille Stories, the question of labor is analyzed in *When Species Meet*:

What, however, if human labor power turns out to be only part of the story of lively capital? Of all philosophers, Marx understood relational sensuousness, and he thought deeply about the metabolism between human beings and the rest of the world enacted in living labor. As I read him, however, he was finally unable to escape from the humanist teleology of that labor—the making of man himself. In the end, no companion species, reciprocal inductions, or multispecies epigenetics are in his story (Haraway 2008, pp. 45-46).

Although Haraway is influenced by the contributions of Marxist feminism, she considers that, in general, these theorists continued to understand labor as something exclusive to people (2008, 74), that is, they did not question the dualism between nature and culture that is the basis of human exceptionalism. On the contrary, Haraway argues that it is fruitful to redefine labor in terms of multispecies.

Paid labor, as feminists have shown, does not seem to be a proper model to understand by analogy the status of unrecognized or unpaid work. The discussion about salary for domestic labor

was a response that was partly based on this analogy but that, with its limitations, tried to dismantle the distinction between productive and reproductive labor. In addition to warning against the essentialization of “feminine” activities and against the universalization of certain models of production of human beings, families, and communities, Haraway states that “I can’t use the term «reproduction» without the term «production»” (Franklin, 2017, p. 10). Within capitalism “turning all the world into commodities for exchange is central to the process. Indeed, remaking the world so that new opportunities for commodity production and circulation are ever generated is the name of this game” (Haraway 2008, pp. 45-46). Living capital, both human and non-human, is included in this process, both in terms of commodities and in terms of labor. Labor appears more as a type of relationship than as a specific activity. In this sense, the figure of compost could be read as an alternative model of multispecies labor.

In the Communities of Compost, reproduction in terms of production of human beings is halted whereas reproduction is emphasized in terms of multispecies partial regeneration of ecosystems, probably including activities usually called productive but falling under the same horizon of population, growth, and consumption reduction. Haraway sparsely refers to the housing aspects of the communities. The following excerpt contains comments on common spaces and practices and elaborates on the role of play in the communities:

New Gauley compostists soon found that storytelling was the most powerful practice for comforting, inspiring, remembering, warning, nurturing compassion, mourning, and becoming-with each other in their differences, hopes, and terrors. Of course, the Communities of Compost emphasized a deep and wide range of approaches to educating both young and old, and the sciences and arts were especially elaborated and cherished. For youngsters and adults of most species in the communities, play was the most powerful and diverse activity for rearranging old things and proposing new things, new patterns of feeling and action, and for crafting safe enough ways to tangle with each other in conflict and collaboration. The practice of friendship and the practice of play, both ritualized and celebrated in small and large ways, were the core kin-forming apparatuses. Libraries in many formats and materialities abounded to evoke curiosities and sustain knowledge projects for learning to live and die well in the work of healing damaged places, selves, and other beings. (Haraway 2016, p. 150)

This passage offers glimpses of social practices and feminist housing design, such as education and the cultivation of arts and sciences for all ages as well as the abundance of libraries. These two elements also appeared in Firestone’s cyber society, where after a transition in which a univer-

sal income for children, women, and men puts an end to social classes, could use automation to completely replace labor with play (Firestone, 1970/1979, p. 235). The monetary issue is another of the many unanswered questions in Harawayan speculative fabulation of the Communities of Compost; however, the theme of labor is suggested through the formula “work and play,” which recurs throughout the generations of the *Camille Stories*. Play, as the passage indicates, is the most powerful activity in multispecies conflict and collaboration. As in some feminist science fiction novels, such as Joanna Russ’s *The Female Man*, labor persists, even when accompanied by play, in utopian feminist societies. Even in highly technologized feminist societies such as *Whileaway*, “the ecological housekeeping is enormous” (Russ, 1975/ 1986, p. 14). A similar fate, namely great efforts for regeneration, takes place in the Communities of Compost, which insist on repairing ecosystems in ruins. Even under a model of composting work that is linked to play in favor of regeneration, labor ironically seems to persist in a society that has completely redefined labor. Yet labor is no longer a humanizing or gendering mark, but rather a multispecies activity that unfolds a different series of relationships.

5. Conclusion

The digitization boom, as well as the ongoing employment and care crises, has renewed the debate on the possibility of reducing or eliminating labor. As a key issue for feminist politics, I have raised the question of whether technology should be rejected or embraced to reduce workload. Despite its great topicality, this is not a new theme within the corpus of feminist theory. On the contrary, the role of technology and automation has appeared both in the critique of capitalist development and in the imaginings about the future of Marxist feminists. On the role of technology, various positions have been deployed, from skepticism to technological optimism regarding social change. In exploring the nuances and differences, however, we observe that the relationship between labor and technology opens three fields of common feminist concern: the need to reform the family and the family household so that social reproduction is assumed collectively; the power of a feminist-oriented design for these purposes; and the redefinition of labor and consumption according to a broader ecological interest.

Based on this inherited field of debate, the article argued that Haraway’s position regarding the value of technology rejects technological solutionism but not technology. On the contrary, technology, particularly reproductive technology, appears as a central element of feminist politics and, more broadly, as a strategic element for the continuity of life. Both technology and labor, particularly reproductive labor, are redefined by Haraway in multispecies terms. The paradox of the reproductive labor of the Communities of Compost is that to regenerate life on earth, that is, to reproduce life, human reproduction must slow down. Rather than social reproduction, it involves multispecies regeneration. Nevertheless, not everything is labor in the Communities of Compost. Play, which had figured in the feminist tradition as the activity that would reign once labor was

eliminated, is also part of the multispecies network. The irony suggested by the article is that labor not only continues but seems more abundant than ever, as the ecological crisis is overwhelming. However, the labor of Haraway's speculative communities is more like a compost pile than a humanizing activity.

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